### DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES Office of Structural Materials Quality Assurance and Source Inspection

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Contract #: 04-0120F4

Cty: SF/ALA Rte: 80 PM: 13.2/13.9

File #: 69.28

# WELDING INSPECTION REPORT

Resident Engineer: Pursell, Gary **Report No:** WIR-004974 Address: 333 Burma Road **Date Inspected:** 08-Dec-2008

City: Oakland, CA 94607

**OSM Arrival Time:** 1400 **Project Name:** SAS Superstructure **OSM Departure Time:** 2200 **Prime Contractor:** American Bridge/Fluor Enterprises, a JV

Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Changxing Island, Shang

**CWI Name: CWI Present:** Yes N/A No **Inspected CWI report:** Yes N/A **Rod Oven in Use:** Yes No No N/A N/A **Electrode to specification:** Yes No Weld Procedures Followed: Yes No N/A N/A **Qualified Welders:** Yes No **Verified Joint Fit-up:** Yes No N/A N/A Yes No N/A **Approved Drawings:** Yes No **Approved WPS:** Yes No N/A **Delayed / Cancelled:** 

**Bridge No:** 34-0006 **Component:** Tower components

## **Summary of Items Observed:**

On this date CALTRANS OSM Quality Assurance (QA) representative was present for observations relative to fabrication performed by Zhenhua Port Machinery Company (ZPMC) for the fabrication of Orthotropic Box Girder (OBG) and SAS Tower at Changxing Island, in Shanghai, China. While on site the QA Inspector noted the following:

### Deck Panel DP603-001

1. The QA Inspector and QA Inspector Aaron Wintrich performed Ultrasonic Testing (UT) on the Partial Joint Penetration (PJP) welds made between the U-ribs (five ribs, two welds per rib ten total welds) and flat plate members of the assembly deck panel identified as DP603-001. The QA Inspectors performed the ultrasonic testing using the gate to gate method on the tack weld areas only a total of 200 tack welds were made on the ten welds. The QA Inspectors performed the testing on the weld number one through ten. The QA Inspectors observed several linear indications that appeared to be suspected planar discontinuities located at random locations on the welds and the indications were marked on the steel for Phased-Array Ultrasonic Testing (PAUT) investigation that will be performed at a later time. The observed indication's "Y" location was recorded into the QA Inspector's U-Rib to Deck Panel - Weld assessment sheet. The QA Inspectors used the ZPMC ultrasonic testing procedure identified as "UT 04-012024 PJP Rib Weld", Ultrasonic Testing for the Detection of Suspected Planar Discontinuities (Cracks) in PJP Welds for the evaluation of observed indications. The QA Inspectors completed the testing on the weld number one through ten on this shift. The QA Inspector notified Task Leader Albert CArreon of indications observed and the status of complete testing.

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Deck Panel DP602-001

2. The QA Inspector and QA Inspectror Aaron Wintrich performed UT on the PJP welds made between the U-ribs (five ribs, two welds per rib ten total welds) and flat plate members of the assembly deck panel identified as DP602-001. The QA Inspectors performed the ultrasonic testing using the gate to gate method on the tack weld areas only a total of 90 tack welds were made on the ten welds. The QA Inspectors performed the testing on the weld number one through ten. The QA Inspectors observed several linear indications that appeared to be suspected planar discontinuities located at random locations on the welds and the indications were marked on the steel for PAUT investigation. The QA Inspectors used the ZPMC ultrasonic testing procedure identified as "UT 04-012024 PJP Rib Weld", Ultrasonic Testing for the Detection of Suspected Planar Discontinuities (Cracks) in PJP Welds for the evaluation of observed indications. The QA Inspectors completed the testing on the weld number one through ten on this shift. The QA Inspector notified Task Leader Albert Carreon of indications observed and the status of testing.

## **Summary of Conversations:**

As noted in the body of the report above.

#### **Comments**

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Peter Dautermann, (1500) 129-9593, who represents the Office of Structural Materials for your project.

Inspected By:	Medina,Ricardo	Quality Assurance Inspector
Reviewed By:	Carreon,Albert	QA Reviewer